"FISKLOCK"-"TAPESTRY" BRICK

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“FISKLOCK”-“TAPESTRY” BRICK

THE LAST WORD IN BUILDING CONSTRUCTION

No. 33 A.

MANUFACTURED ONLY BY

FISKE & COMPANY INC
FACE BRICKS } ESTABLISHED IN 1864
FIRE BRICKS }

25 ARCH STREET
BOSTON, MASS.

40 WEST 32nd STREET
NEW YORK

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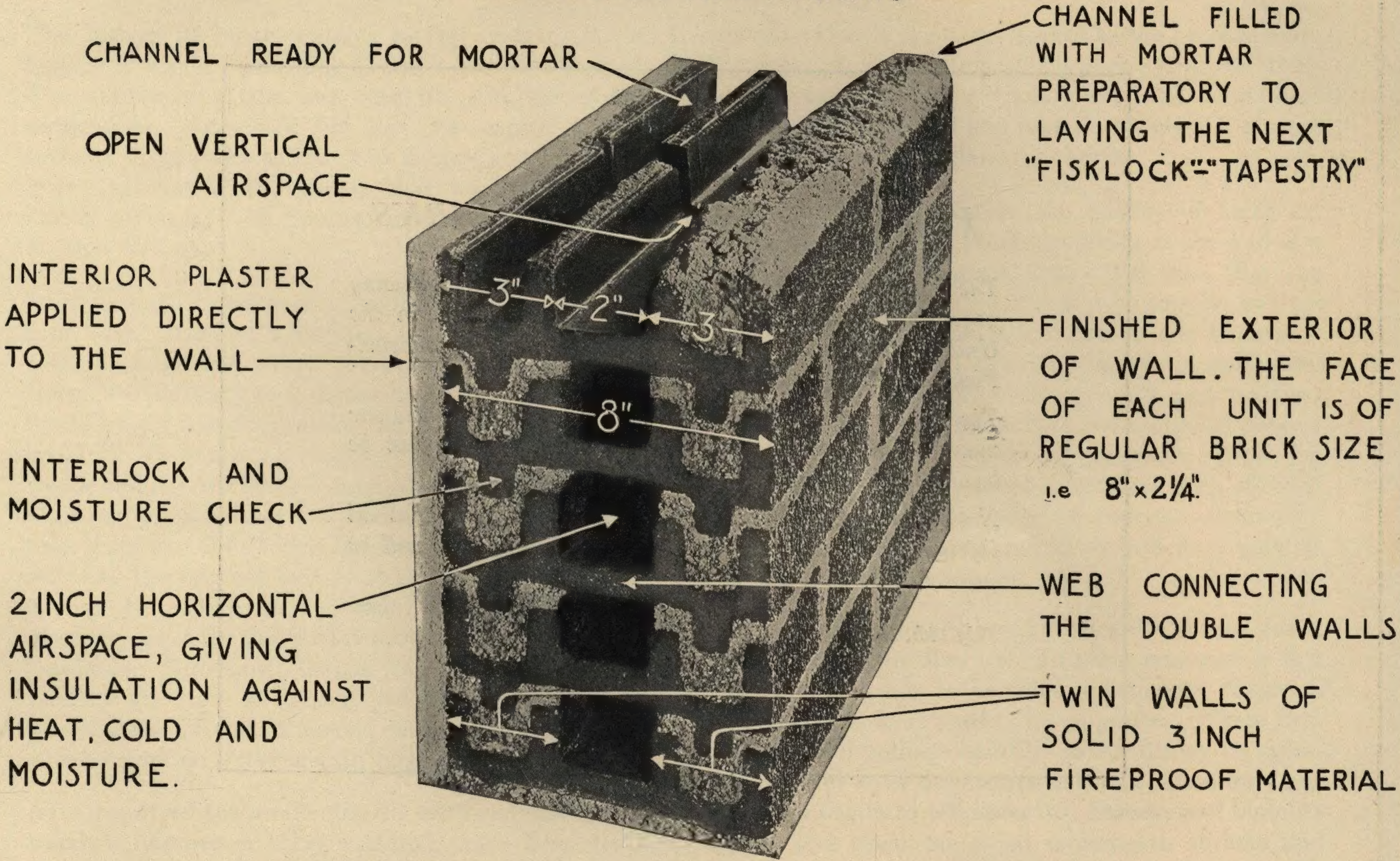
J. PARKER B. FISKE

"FISKLOCK"-"TAPESTRY" BRICK

HARDONCOURT-FISKE PATENTS.


CHANNEL READY FOR MORTAR
OPEN VERTICAL AIRSPACE
INTERIOR PLASTER APPLIED DIRECTLY TO THE WALL
INTERLOCK AND MOISTURE CHECK
2 INCH HORIZONTAL AIRSPACE, GIVING INSULATION AGAINST HEAT, COLD AND MOISTURE.
CHANNEL FILLED WITH MORTAR PREPARATORY TO LAYING THE NEXT "FISKLOCK"-"TAPESTRY"
FINISHED EXTERIOR OF WALL. THE FACE OF EACH UNIT IS OF REGULAR BRICK SIZE i.e 8" x 2¼".
WEB CONNECTING THE DOUBLE WALLS
TWIN WALLS OF SOLID 3 INCH FIREPROOF MATERIAL
3"
2"
3"
8"

FISKE & COMPANY INC.

BOSTON & NEW YORK

PATENTS AND TRADE MARKS

The Interlocking Channel Brick described in the following pages is broadly and fully covered and protected in the United States and foreign countries by the Hardoncourt-Fiske Patents.

The trade marks "Fisklock" and "Tapestry" guarantee our manufacture, are our exclusive property, and cannot be legally used in connection with any other brick.

Notice is hereby respectfully given to the trade that all infringements, whether of patents or trade marks, will be prosecuted.

FISKE & COMPANY, Inc.

July 15th, 1915.

FOREWORD

The history of home building in this country is the history of a slow awakening to the inferiority of wood. The discouraging part has been the slowness of the awakening. America's fire loss per capita is still seven or eight times as heavy as Europe's and twice as heavy as that of the Russia that we look upon as hardly civilized! All because we build of wood and Europe does not.

It is hard to overthrow a tradition that once takes firm hold. America's fondness for the kind of house that most quickly wears out or burns down can be traced to the earliest Colonial days. Our forefathers found virgin forests awaiting the axe; to get the material for his home the pioneer just went out into the woods and cut down a few trees. But there came a day of course when lumber was no longer plentiful and the price went up. The wisest of our citizens then began to see that the original cost of wood was no longer low enough to justify its excessive maintenance. This discovery gave the first real stimulus to the use of other materials. And now, though the majority of home builders still use wood, not yet having learned the wastefulness of such a course, there has come to be a wide recognition of its generally unsatisfactory character.

As a result of the awakening to the disadvantages of wood, a number of other materials have been tried. Stone has always been used to some extent, but is so expensive that it can never appeal to the average man. The types of construction which have attracted attention as substitutes for frame—practical substitutes from the standpoint of first cost—are concrete, stucco-on-frame, stucco-on-hollow-tile, brick.

Concrete shares with stone the quality of being essentially unhomelike. When one looks at the wall of a concrete house, he cannot escape the idea that the proper function of this substance is to support bridges and dams and to provide foundations for huge skyscrapers. Concrete is massive, almost gloomy, and unless treated with extraordinary skill and watched every moment during the mixing and moulding process it will have defects that are all the more serious for being hidden. Striking proof of this has been afforded by the many fatal collapses of concrete structures. Concrete never has been and never will be a popular building material for homes.

Stucco-on-frame has enjoyed a vogue in recent years, but its virtues are fleeting. In plain language it is a sham. It pretends to be solid, substantial, fireproof, while in fact it is quite the opposite. When first plastered and perhaps daintily tinted, it may be agreeable to some eyes despite its effect of monotony, but time soon begins to tell upon it. Streaks and blotches appear, and when the wood underneath shrinks and warps, the thin stiff layer of plaster begins to crack and in some cases to peel off. The final demonstration of unfitness often comes in the form of serious leaks. Of course the stucco adds practically nothing to the safety of the house—it is only a surface dressing and affords little real protection against fire and time. The man who builds this kind of a house is like the huckster who puts his large ripe berries on top.

Stucco-on-hollow-tile is distinctly better because the fire-proof blocks with air spaces provide insulation against heat and cold and form a trustworthy backing. But here, too, we have in the necessary plaster finish something of the monotony and unfriendliness of solid concrete as well as the eventual disfiguration. Not only that, but most forms of hollow tile construction are marked by structural defects that stand squarely in the way of perfection. Chief among these is the unbroken mortar joint which permits the transmission of moisture from the outer atmosphere to the interior plaster, and the filling up of the voids at the bottom of the wall with the droppings of the mortar from above, thereby creating in effect a solid non-insulating wall several feet high.

It is not until we come to brick that we find the ideal material. There was a time when people thought of brick mainly in connection with factories and warehouses, but since the choice of colors, shapes and textures of brick has become nearly as wide as the choice in silks and woolens this time has passed away. This improvement in brick manufacture has enabled the architect to bring about a wonderful revival in brick house construction. One can hardly go out for an afternoon's walk or a motor drive without seeing some beautiful country house of brick—a house so cleverly designed, of such soft, rich colors, and so harmonious with the landscape that it looks as if it had been dropped among the trees and shrubbery by Nature itself.

The durability of brick is attested by the experience of long centuries of use. Being nothing less than a part of Earth, it is as indestructible as Earth itself. It is made by fire and fire cannot harm it. Wind and rain have no effect upon it. It does not decay or wear out. The brick house, costing only a trifle more than the frame house, never has to be painted, is heated more cheaply than any other kind, hardly ever needs repairs, and instead of depreciating grows more valuable year by year. A brick house is the safest of all investments.

The one thing necessary to give the final touch of perfection to "Tapestry" Brick, long recognized as the standard of beauty and durability, has now been achieved. The better insulation afforded by interior air spaces has been combined with the elimination of the moisture-transmitting mortar joint. At last there is a material, fire-proof, moisture-proof, and vermin-proof, that has all the heat and cold resistance of hollow tile and yet surrenders nothing of the beauty and solidity of brick. Just how this result has been achieved will be amply demonstrated in the following pages.

"FISKLOCK"-"TAPESTRY" BRICK

Character:—"Fisklock"-"Tapestry" Brick is not a hollow tile—it is an interlocking channel brick.

Mechanical Features:—It provides a double, hollow wall with a brick face. It consists of two solid masonry walls each three inches thick—not thin, fragile shells easily punctured by a blow or shattered by fire and water.

The double walls are separated by a two-inch air space, yet are bound inseparably together by webs made integral with the brick itself—there are no metal ties to corrode, break, or pull out. Every brick is both a "header" and a "stretcher."

Corners, window jambs, arches, belt courses, ornamental panels, etc., are built with solid "Tapestry" Brick of the same color, thereby obviating the complication arising from the great variety of shapes and sizes usually necessary in hollow-tile construction.

Strength:—As set forth at greater length in the succeeding pages, a "Fisklock" wall has nearly double the strength of a solid wall made of ordinary common brick and is over 25 per cent. stronger than a hollow-tile wall.

Damp-Proofness:—It is a well-known fact that dampness traverses a brick wall through the mortar joints, which are much more porous than hard-burned clay. "Fisklock" itself has no continuous mortar joints through the wall, either horizontally or vertically. There is no possibility of moisture "striking through." This is an absolutely unique feature in brickwork.

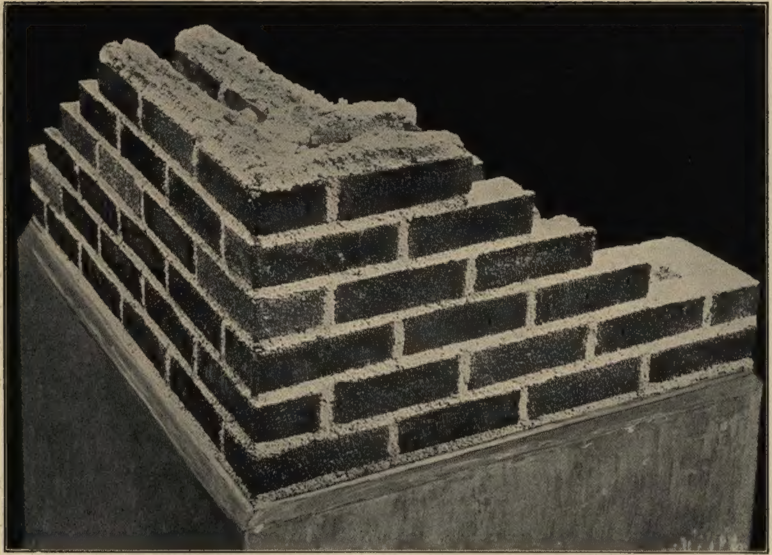
Where solid "Tapestry" Brick is used around windows, doors, etc., as above stated, a small amount of waterproofing on the inside of the solid brickwork is desirable because of the "through" mortar joints at these points.

Resistance to Heat and Cold:—The solid double walls, separated by closed air cells, provide maximum heat and cold insulation.

The air cells in "Fisklock" construction are horizontal, thereby eliminating internal air circulation caused by the up- and down-drafts which are common within most hollow walls.

Even hollow-tile or solid brick construction saves 15 per cent. to 25 per cent. of the heating expense necessary for a frame house. Tests by the Engineers of Columbia University indicate that the heat transmission through "Fisklock" walls is considerably less than that through walls of hollow tile or solid brick, and the saving in heating bills is therefore even greater.

DETAILS OF "FISKLOCK"-"TAPESTRY" WALLS

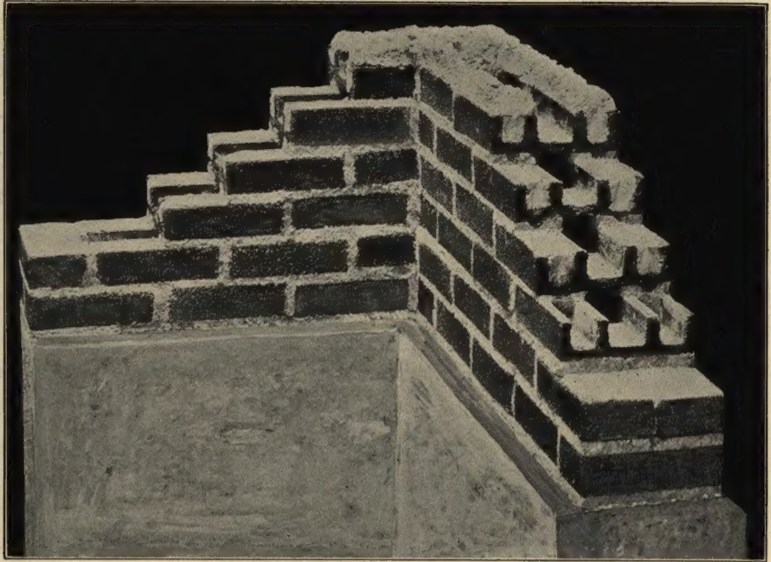


External Angle

The above picture shows how it is possible to turn a corner or build a jamb of "Fisklock" combined with solid "Tapestry" Brick. In the same way it is possible to use solid octagon brick for bay windows.

The solid brick having the same color, texture and surface dimensions as the "Fisklock" cannot be distinguished from the latter after the wall is built.

With these two units and a few common brick for backing up, all details of ordinary brickwork construction can be carried out.



Internal Angle

Particular attention is called to the 2-inch air space in the center of the wall. Also the method of building a termination of the wall with solid "Tapestry," as, for instance, at a window or door opening.

Comfort:—Because of its remarkable heat-insulating qualities a "Fisklock" house is much warmer in winter and cooler in summer than a house of any other construction.

Sanitary:—A "Fisklock" house is sanitary to the highest possible degree because it is damp-proof and vermin-proof.

Fire Risk:—"Fisklock" construction has the lowest possible fire risk of any known building system. There is absolutely nothing that can burn—no frame, boarding, furring or paper—not even a lath. "Fisklock" is made of hard-burned clay which in the brick kiln has already been subjected to a greater heat than is possible in any ordinary conflagration. Burned clay is the only finished building material of which this is true.

Insurance:—The insurance on a "Fisklock" house is only two-thirds that of a corresponding frame house.

Painting:—With "Fisklock," the expense of painting exterior walls is forever eliminated.

Repairs:—"Fisklock" walls are indestructible. They never rot, disintegrate, settle, or in any other way give out—there is absolutely nothing to repair.

Maintenance and Depreciation:—Because of the above facts, maintenance and depreciation (so great in a frame house) are reduced to an absolute minimum.

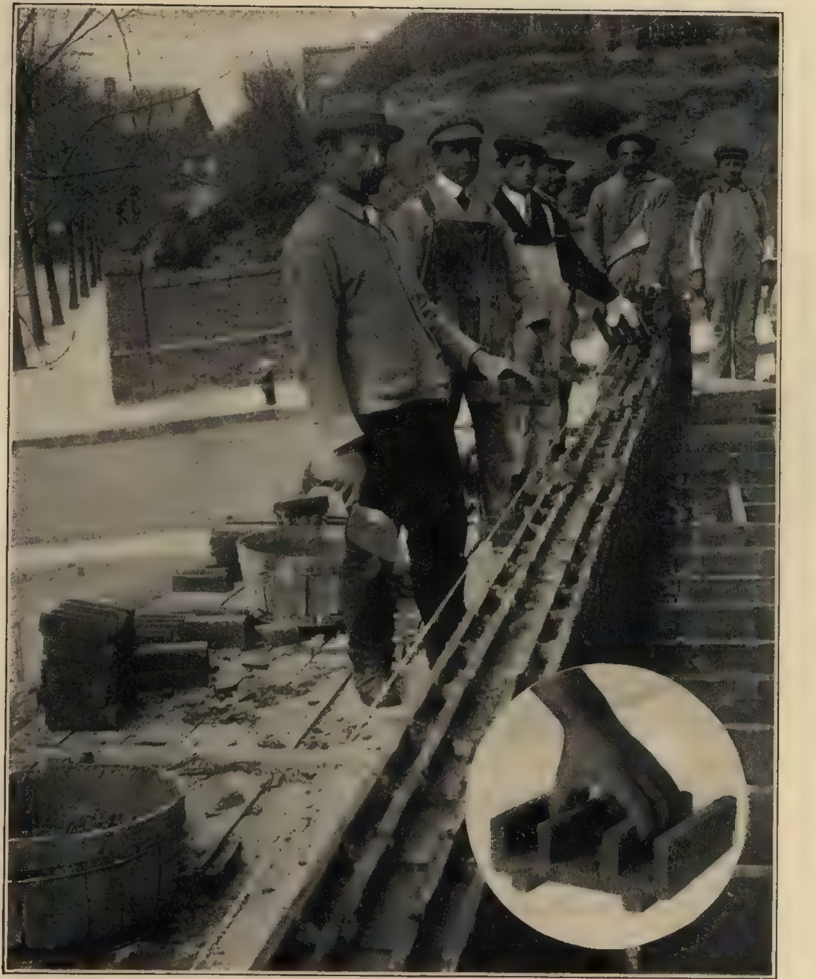
Beauty:—A brick house is beautiful. It is dignified in appearance, restful to look upon and is clothed in soft, rich, unfading colors. Brick is the aristocrat of building materials.

"Fisklock" possesses the artistic characteristics of the highest grade modern face brick—shape, size, texture, and color, and it employs the same interesting texture and color of mortar joint.

Cost:—A "Fisklock" wall costs much less than any other face brick wall, whether solid or brick veneer; it costs less than terra-cotta hollow tile covered with stucco, and only slightly more than stucco-on-frame. As compared with frame-clapboard construction a "Fisklock" house of moderate size costs 3½ per cent. to 5 per cent. more. Its ultimate cost is far less because of its low upkeep.

Salability:—A good brick house will always sell for its first cost, and usually for more. This is because, unlike other materials, brick does not depreciate, but grows richer, more beautiful and more charming in appearance as it grows old.

As an Investment:—Brick is the most permanent of all building materials; therefore it is the best investment. If you do not believe this, ask your banker. "Fisklock," costing less than solid brick, is the best investment of all.



Laying-up a "Fisklock"-"Tapestry" Brick Wall

POINTS OF INTEREST

"Fisklock" should be laid to a line exactly like solid brick.

It should invariably be laid from an outside scaffold to insure proper quality of workmanship. Note that no inside scaffolding is required, as there is no "backing-up" wall to lay.

Note the ease with which the bricklayer holds a "Fisklock" in his left hand and the trowel in his right hand, exactly as in the case of solid brick. He grasps the two inside webs between his thumb and fingers, the brick being so designed that the width of grip is the same as with solid brick—it does not tire his hand.

It is remarkable how quickly the bricklayer "takes" to "Fisklock." The men in the accompanying picture who were entire strangers to the material, found, after a few hours' experience, that they could easily lay as many "Fisklock" in a day as they could lay of solid face brick. As each "Fisklock" is equivalent to one face brick and one "backing-up" brick, the economy of this construction will readily be seen.

DETAILS OF CONSTRUCTION

In General:—The construction of a "Fisklock" house is a very simple matter. Only three kinds of brick are required—"Fisklock," a few solid "Tapestry" Brick to match, and a few common brick for "backing up" the solid brick. With these three units, the bricklayer can carry out all the details of ordinary brick construction, such, for instance, as corners, window and door openings, panels, soldier courses, rowlock courses, gable ends, flat and circular arches, etc., etc. These various details are shown on the following pages.

Bond:—To secure the maximum advantages of "Fisklock" it should be laid in "running" bond. Other bonds such as English, Flemish or Dutch may be secured by using solid "Tapestry" Brick headers, but this introduces considerable extra expense and the possibility of "through" mortar joints.

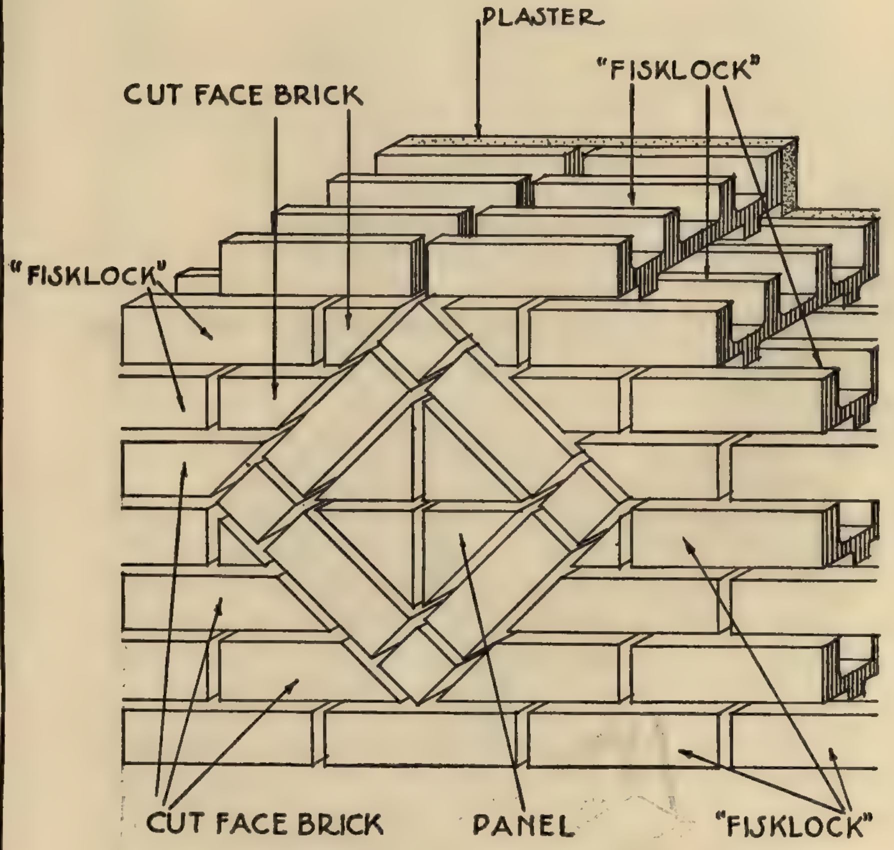
Furring and Lathing Unnecessary:—Because of its freedom from "through" mortar joints—an absolutely novel feature in brick construction—furring and lathing are unnecessary on the inside of the wall. The plastering may be put directly on the brickwork, thereby eliminating fire risk and chance for vermin.

Waterproofing:—It is necessary to apply waterproofing only on the back of the solid brickwork around window and door openings or wherever there are "through" mortar joints by reason of solid brick being used. This is clearly shown on pages 14, 17, 18 and 19.

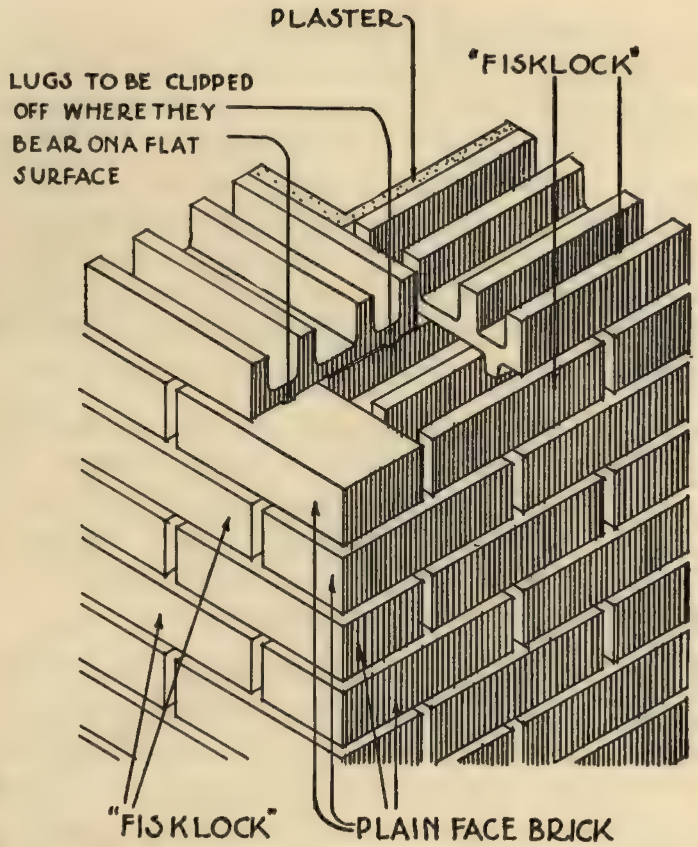
Caulking:—Around window and door openings all cracks between brickwork and wood frames should be carefully caulked with oakum as in the case of any good masonry house, in order to prevent transmission of water through open crevices. This can easily be accomplished from the front and back of the wall before the staff beads and plastering are put in place. This is clearly shown on pages 14, 17, 18 and 19.

Floor Beams:—As clearly shown on page 13, second-story floor beams should preferably be hung on iron hangers as required for 8-inch walls by the building codes of many cities. The continuity of the "Fisklock" construction should not be interrupted by cutting the beams into the wall. Where the latter is done it is necessary to cut the "Fisklock" and fill in between the beams with solid brick. This introduces the liability of "through" mortar joints and necessitates the use of water-proofing at this point, as above stated.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK. Ⓐ



METHOD OF BUILDING A PANEL
IN A "FISKLOCK"-"TAPESTRY" WALL

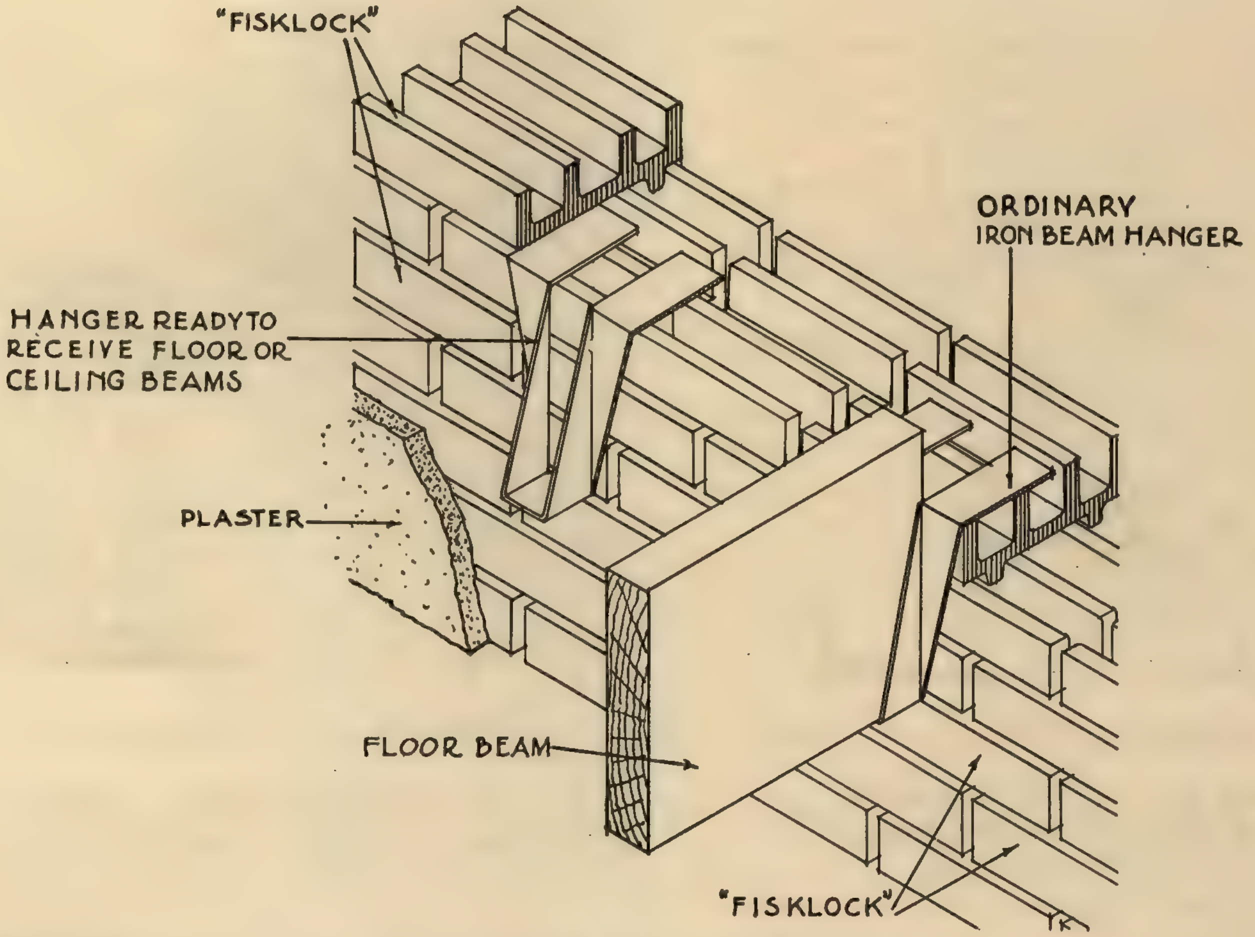


METHOD OF BUILDING A CORNER
IN A "FISKLOCK"-"TAPESTRY" WALL

FISKE & CO., INC
BOSTON & NEW YORK

DRAWING No 4666
DATE. MAR. 20, 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK. Ⓑ

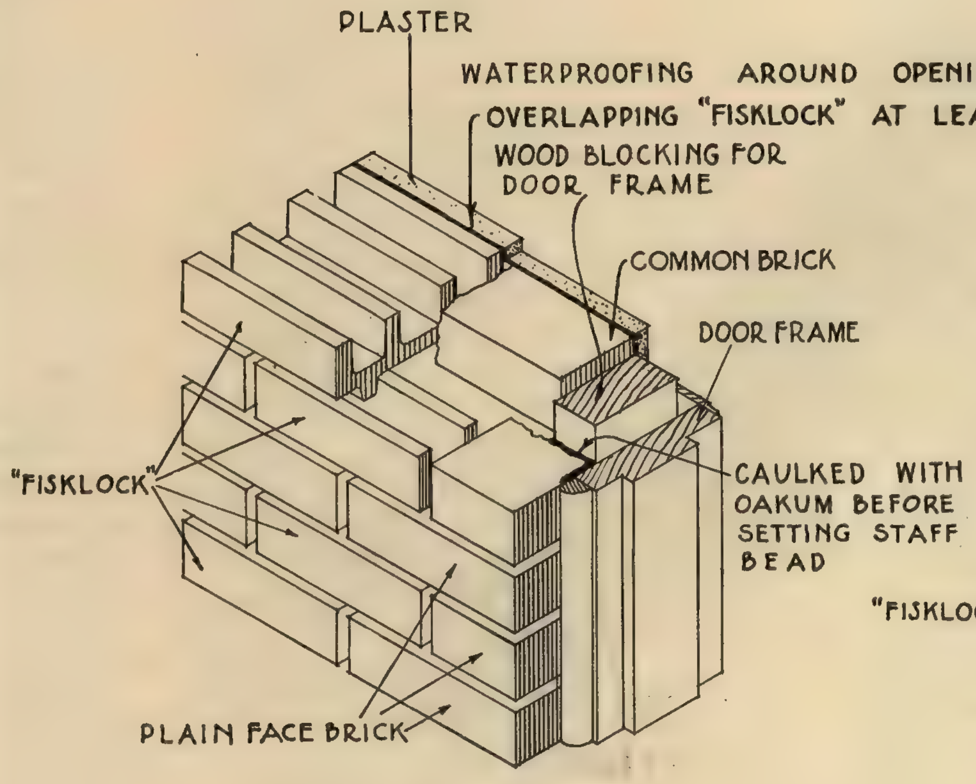

"FISKLOCK"
ORDINARY IRON BEAM HANGER
HANGER READY TO RECEIVE FLOOR OR CEILING BEAMS
PLASTER
FLOOR BEAM
"FISKLOCK"

FISKE & CO INC.
BOSTON & NEW YORK.

METHOD OF HANGING FLOOR OR
CEILING BEAMS IN A "FISKLOCK"-"TAPESTRY" WALL

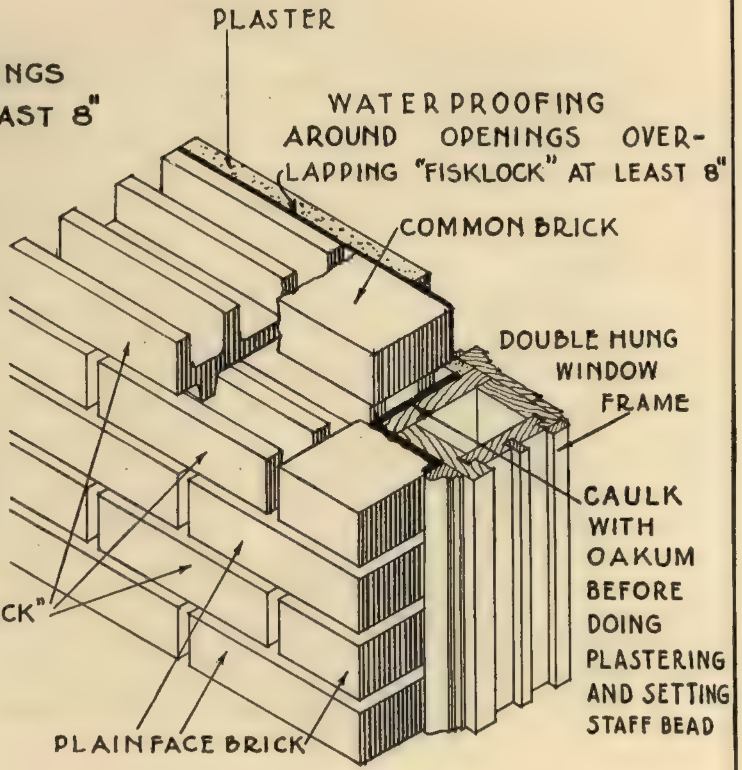
DRAWING Nº 4662
DATE MAR. 20, 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK ©


PLASTER
WATERPROOFING AROUND OPENINGS OVERLAPPING "FISKLOCK" AT LEAST 8"
WOOD BLOCKING FOR DOOR FRAME
COMMON BRICK
DOOR FRAME
"FISKLOCK"
CAULKED WITH OAKUM BEFORE SETTING STAFF BEAD
PLAIN FACE BRICK

METHOD OF BUILDING A DOOR FRAME
IN A "FISKLOCK"-"TAPESTRY" WALL

NOTE: USE SAME METHOD FOR CASEMENT FRAME.

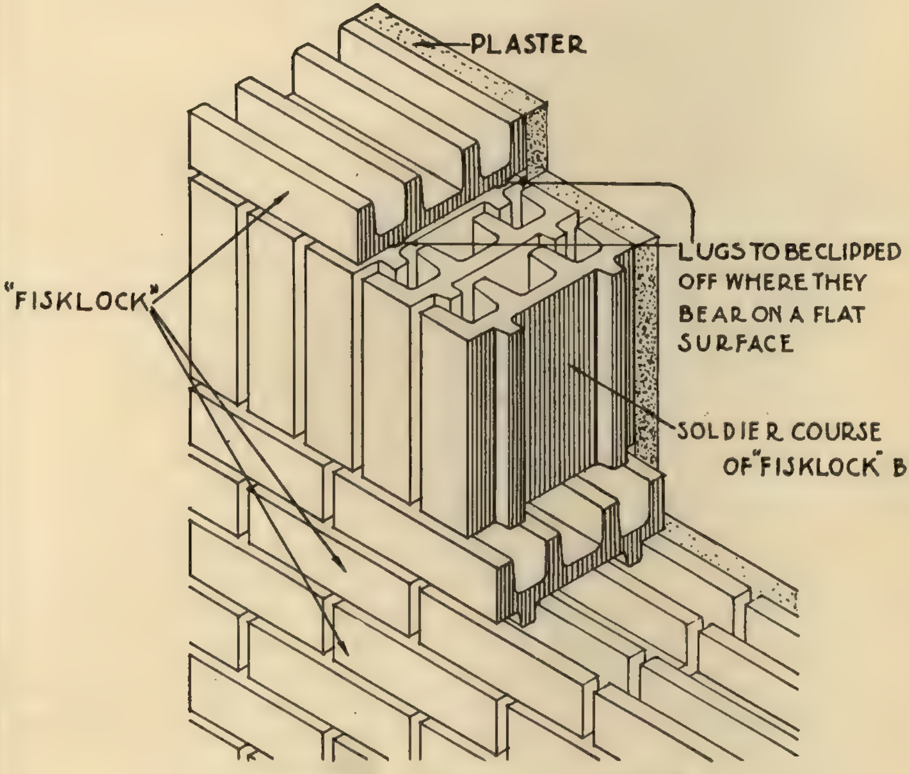

PLASTER
WATER PROOFING AROUND OPENINGS OVERLAPPING "FISKLOCK" AT LEAST 8"
COMMON BRICK
DOUBLE HUNG WINDOW FRAME
CAULK WITH OAKUM BEFORE DOING PLASTERING AND SETTING STAFF BEAD
"FISKLOCK"
PLAIN FACE BRICK

METHOD OF BUILDING A DOUBLE-HUNG
WINDOW FRAME IN A "FISKLOCK"-"TAPESTRY" WALL

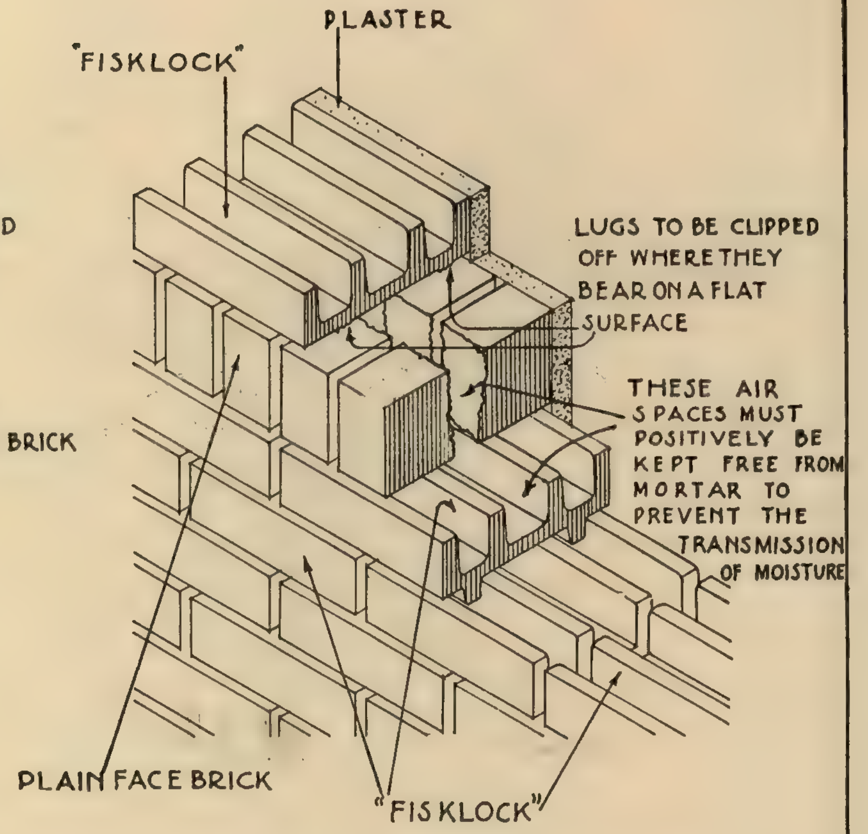
FISKE & CO., INC.
BOSTON & NEW YORK.

DRAWING No 4664.
DATE. MAR. 20, 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"–"TAPESTRY" BRICK. Ⓓ


PLASTER
"FISKLOCK"
LUGS TO BE CLIPPED OFF WHERE THEY BEAR ON A FLAT SURFACE
SOLDIER COURSE OF "FISKLOCK" BRICK

METHOD OF BUILDING A SOLDIER COURSE
IN A "FISKLOCK"–"TAPESTRY" WALL


PLASTER
"FISKLOCK"
LUGS TO BE CLIPPED OFF WHERE THEY BEAR ON A FLAT SURFACE
THESE AIR SPACES MUST POSITIVELY BE KEPT FREE FROM MORTAR TO PREVENT THE TRANSMISSION OF MOISTURE
PLAIN FACE BRICK
"FISKLOCK"

METHOD OF BUILDING A ROWLOCK COURSE
IN A "FISKLOCK"–"TAPESTRY" WALL.

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DRAWING Nº 4663.
DATE. MAR. 20, 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK

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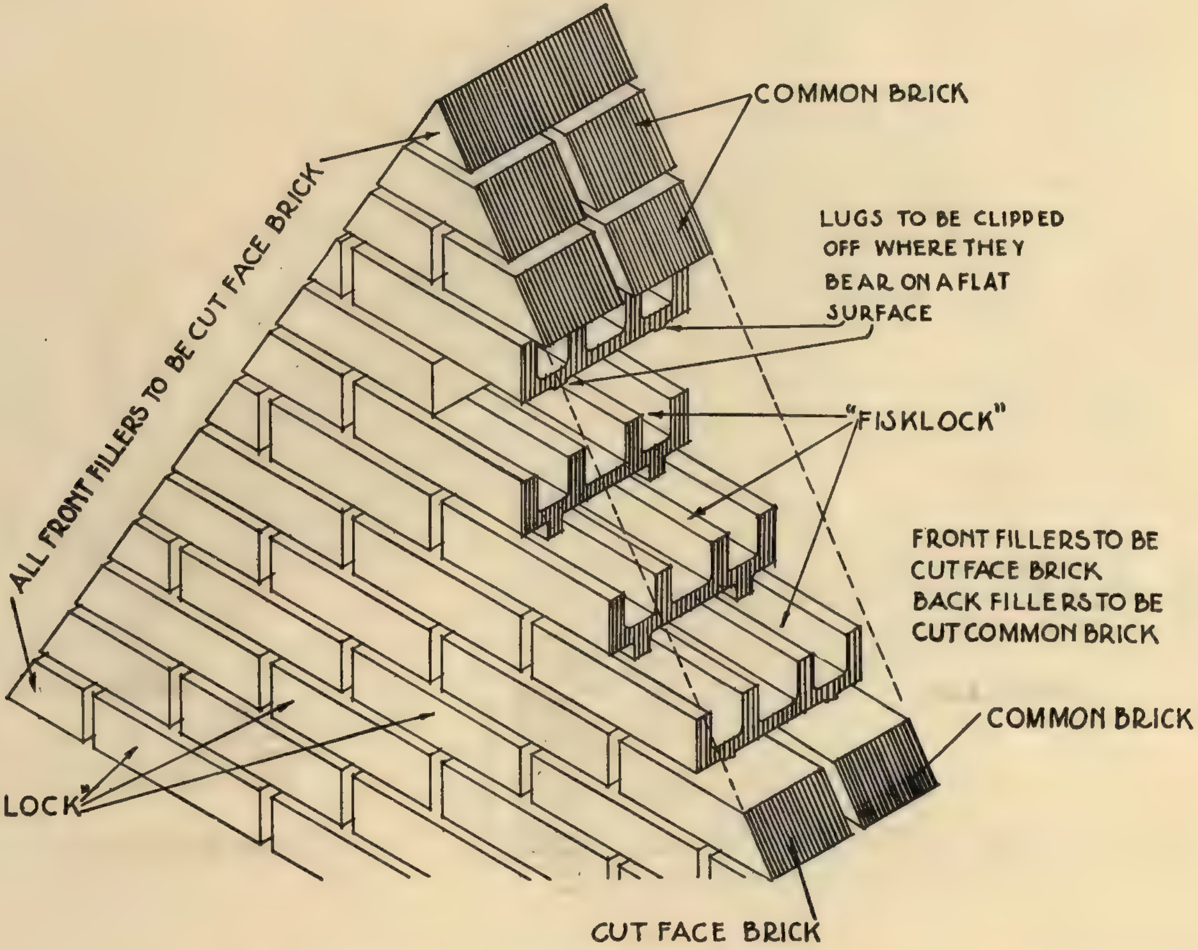
ALL FRONT FILLERS TO BE CUT FACE BRICK
COMMON BRICK
LUGS TO BE CLIPPED OFF WHERE THEY BEAR ON A FLAT SURFACE
"FISKLOCK"
FRONT FILLERS TO BE CUT FACE BRICK BACK FILLERS TO BE CUT COMMON BRICK
COMMON BRICK
"FISKLOCK"
CUT FACE BRICK

FISKE & CO INC.
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METHOD OF BUILDING A GABLE END
IN A "FISKLOCK"-"TAPESTRY" WALL

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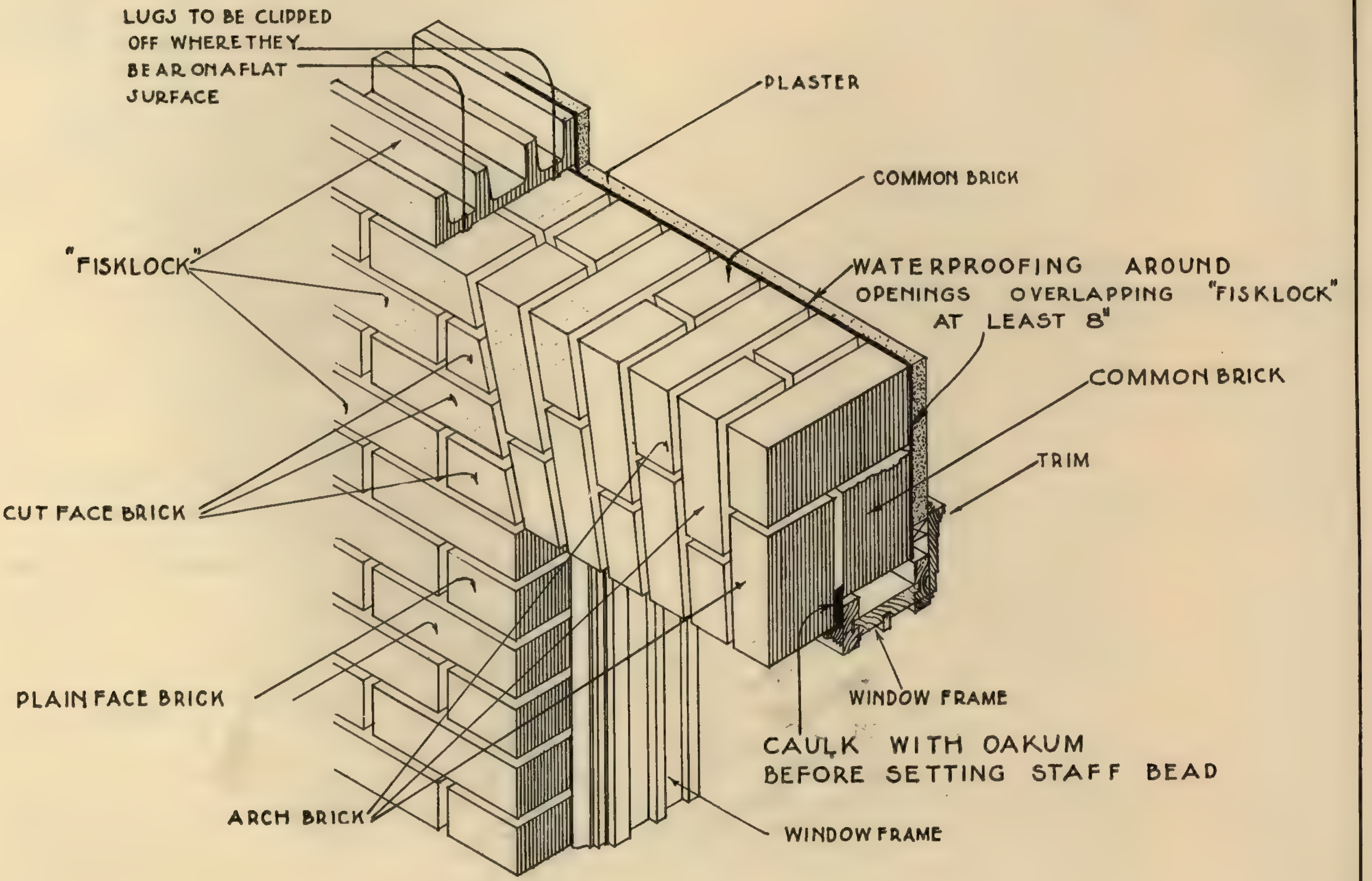
DATE. MAR. 20. 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK


LUGS TO BE CLIPPED OFF WHERE THEY BEAR ON A FLAT SURFACE
PLASTER
COMMON BRICK
"FISKLOCK"
WATERPROOFING AROUND OPENINGS OVERLAPPING "FISKLOCK" AT LEAST 8"
COMMON BRICK
TRIM
CUT FACE BRICK
PLAIN FACE BRICK
WINDOW FRAME
CAULK WITH OAKUM BEFORE SETTING STAFF BEAD
ARCH BRICK
WINDOW FRAME

FISKE & CO., INC.
BOSTON & NEW YORK

METHOD OF BUILDING A FLAT ARCH
IN A "FISKLOCK"-"TAPESTRY" WALL.

DRAWING No 4661.
DATE MAR. 20 1915.

DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK

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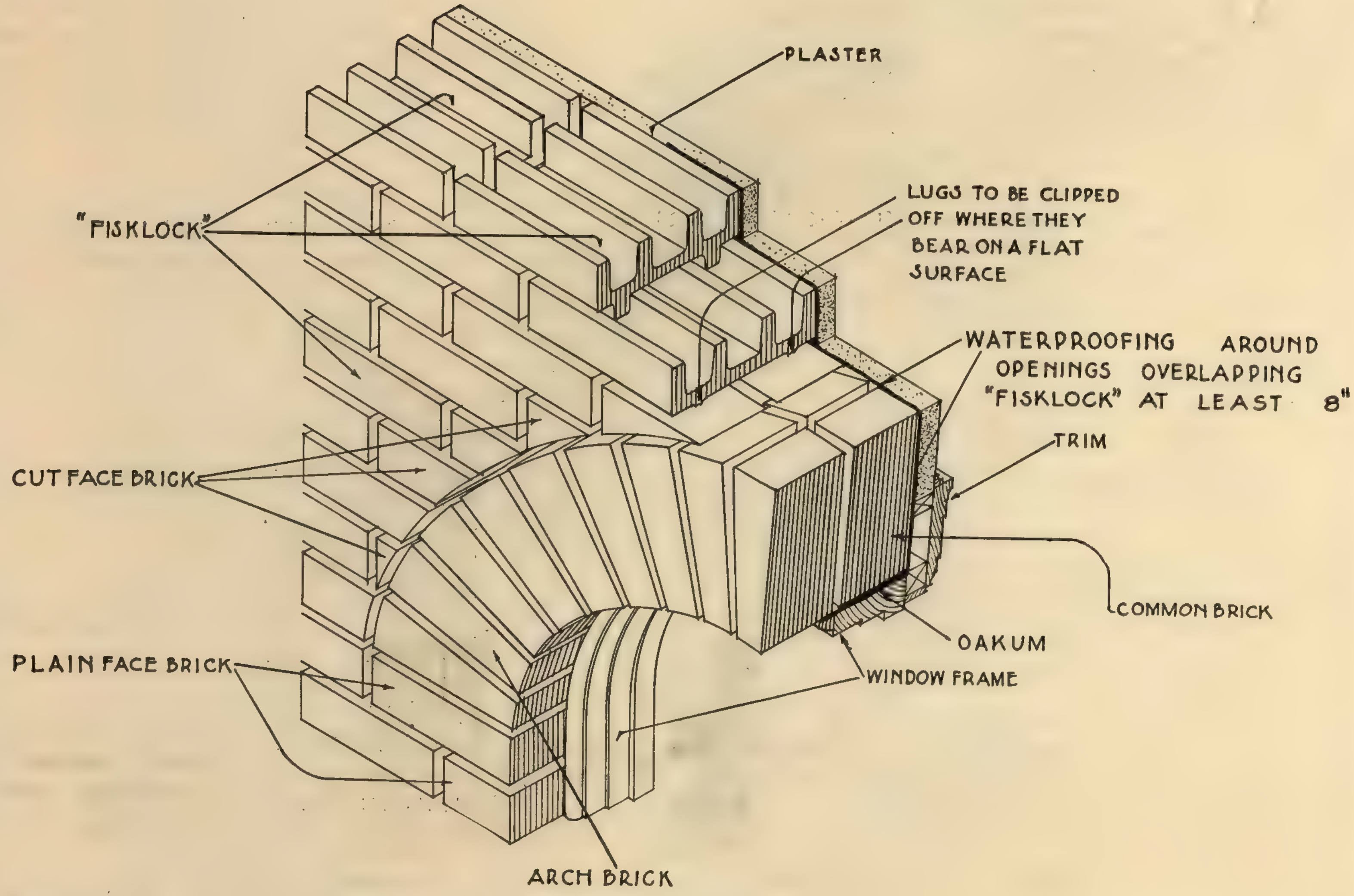
PLASTER
LUGS TO BE CLIPPED OFF WHERE THEY BEAR ON A FLAT SURFACE
"FISKLOCK"
WATERPROOFING AROUND OPENINGS OVERLAPPING "FISKLOCK" AT LEAST 8"
TRIM
CUT FACE BRICK
COMMON BRICK
OAKUM
PLAIN FACE BRICK
WINDOW FRAME
ARCH BRICK

FISKE & CO., INC.
BOSTON & NEW YORK

METHOD OF BUILDING A CIRCULAR ARCH IN A "FISKLOCK"-"TAPESTRY" WALL.

DRAWING Nº 4665
DATE MAR. 20, 1915.

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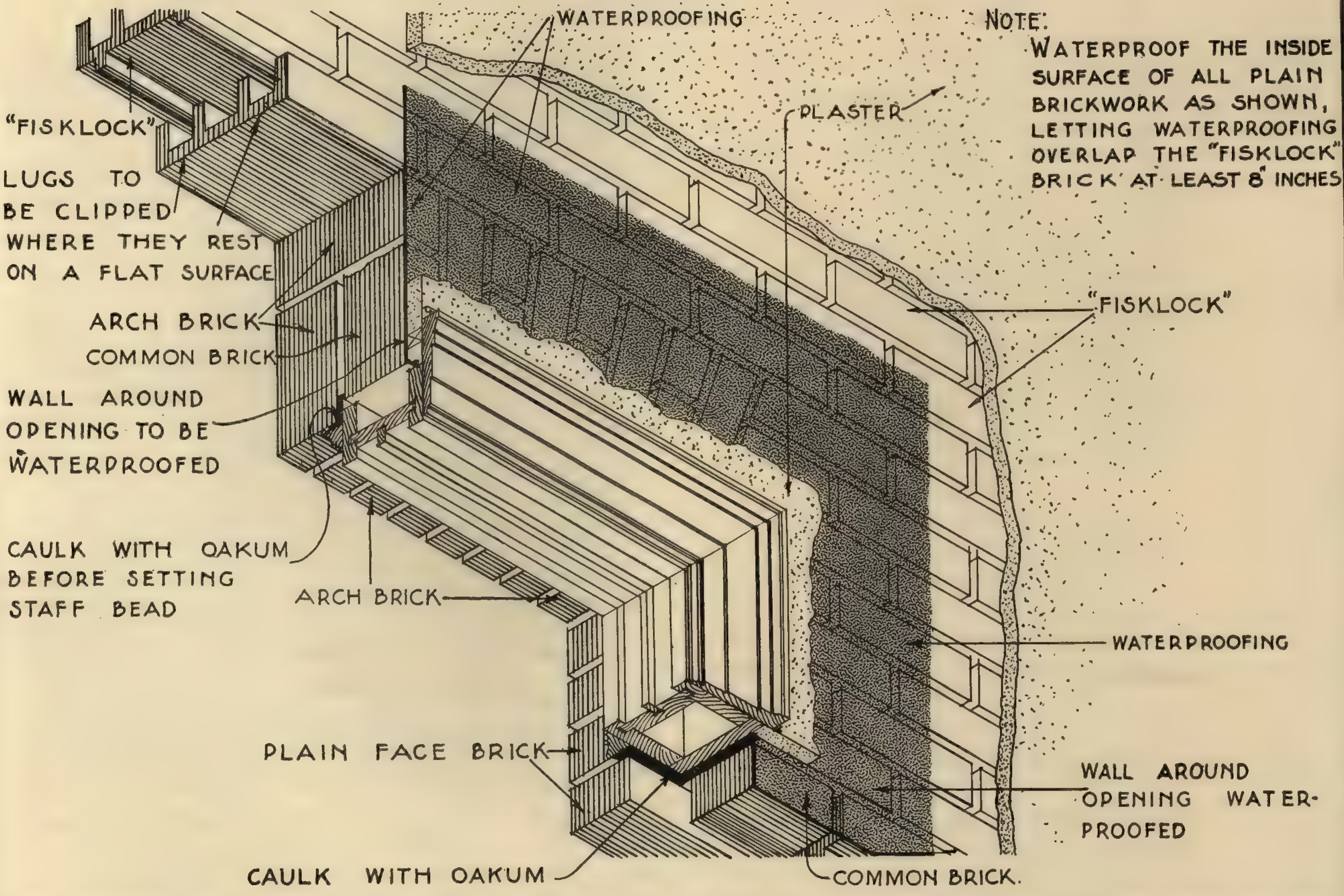
DETAILS OF CONSTRUCTION WITH "FISKLOCK"-"TAPESTRY" BRICK


WATERPROOFING
"FISKLOCK"
LUGS TO BE CLIPPED WHERE THEY REST ON A FLAT SURFACE
PLASTER
ARCH BRICK
COMMON BRICK
WALL AROUND OPENING TO BE WATERPROOFED
"FISKLOCK"
CAULK WITH OAKUM BEFORE SETTING STAFF BEAD
ARCH BRICK
WATERPROOFING
PLAIN FACE BRICK
WALL AROUND OPENING WATER-PROOFED
CAULK WITH OAKUM
COMMON BRICK.

NOTE:
WATERPROOF THE INSIDE SURFACE OF ALL PLAIN BRICKWORK AS SHOWN, LETTING WATERPROOFING OVERLAP THE "FISKLOCK" BRICK AT LEAST 8" INCHES

FISKE & CO., INC.
BOSTON & NEW YORK.

METHOD OF WATERPROOFING AROUND
OPENINGS IN A "FISKLOCK"-"TAPESTRY" WALL

DRAWING Nº 4801.
DATE MAY. 11, 1915.

TESTS

Careful tests have been conducted on "Fisklock" by the Engineers of Columbia University and the Massachusetts Institute of Technology to determine its vertical load-bearing strength, lateral strength, resistance to fire and water, etc., etc.

These tests have shown that it is equal to solid common brick and to terra-cotta hollow tile in its resistance to fire and water, and superior in every other particular. Full and complete details regarding these tests will be furnished upon application. Sufficient information is given in the following pages to satisfy the intending user that it will meet to the highest degree every requirement of a first-class building material.

Vertical Load-Bearing Strength:—Six-foot piers of hollow tile, of common Hudson River brick (of the standard quality required for New York City), and of "Fisklock" were constructed and were subjected to vertical loads until they collapsed, as shown in the accompanying picture. The average of three piers each of these materials disclosed the following ultimate strength per square foot, gross area:

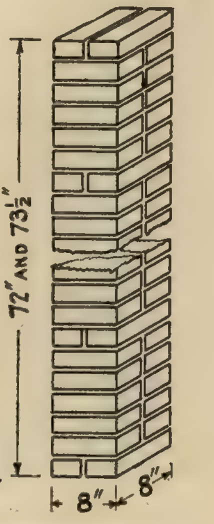
Hollow Tile	86.2 tons.
Common Brick	58.4 tons.
"Fisklock"	109.0 tons.

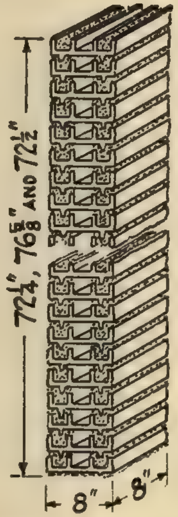
"Fisklock"-"Tapestry" Pier Under Testing Machine at Columbia University
Breaking load—109 tons per sq. ft., gross area.

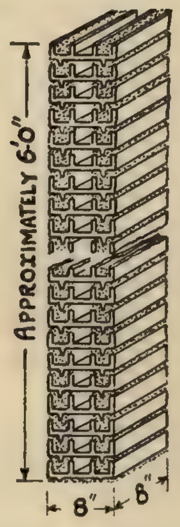
LOAD-BEARING TESTS ON PIERS OF COMMON BRICK "FISKLOCK"-"TAPESTRY" BRICK AND TERRA COTTA HOLLOW TILE.

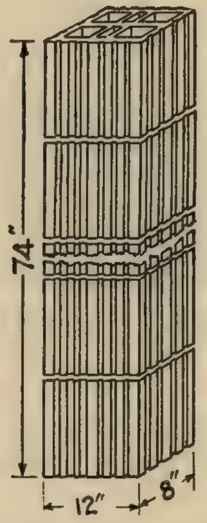
NOTE:
TEST Nº 1 to 5 AND 9 to 11 (incl.) WERE MADE AT THE ENGINEERING LABRATORY OF COLUMBIA UNIVERSITY AND TEST Nº 6, 7, AND 8 WERE MADE AT THE MASS INST. OF TECHNOLOGY

NOTE:
AGE OF TEST ON COMMON BRICK, "FISKLOCK" AND HOLLOW TILE - 60 DAYS.
MORTAR JOINT THICKNESS - 3/8"
MORTAR - 1-PART PORTLAND CEMENT
3-PARTS SAND







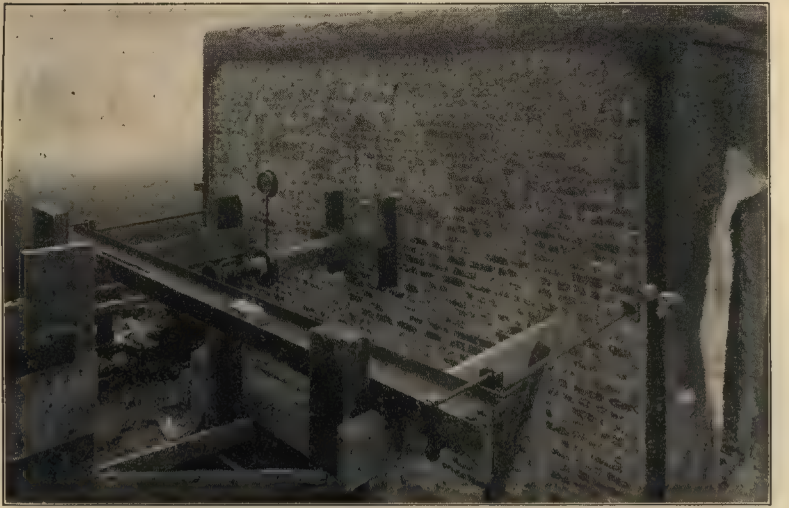


KIND OF PIER	COMMON BRICK		"FISKLOCK"-"TAPESTRY"			"FISKLOCK"-"TAPESTRY"			HOLLOW TILE		
TEST Nº	1	2	3	4	5	6	7	8	9	10	11
Thickness of pier in inches	8	8	8	8	8	8	8	8	✦ 8	✦ 8	✦ 8
Width of pier in inches	8	8	8	8	8	8	8	8	✦ 12	✦ 12	✦ 12
Height of pier in inches	72	73½	72¼	76⅝	72½	72±	72±	72±	74	74	74
Gross Area of pier in sq. inches	64	64	64	64	64	64	64	64	94	94	94
Net Area of pier in sq. inches	64	64	48	48	48	48	48	48	✦ 50.	✦ 50.	✦ 50
First crack	45000	44500	85000	80000	63250	80000	70000	43000	107000	64000	63100
Maximum load in pounds	46200	57680	111340	92800	86400	117000	84000	90000	116200	116450	105000
Max. load per sq. inch Net	722	902	2320	1934	1800	2438	1750	1875	2324	2329	2100
Max. load per sq inch Gross	722	902	1740	1450	1350	1828	1313	1406	1236	1239	1117
AVER LOAD PER SQ. FT. GROSS AREA	58.4 TONS		109.0 TONS			109.1 TONS			86.2 TONS *		

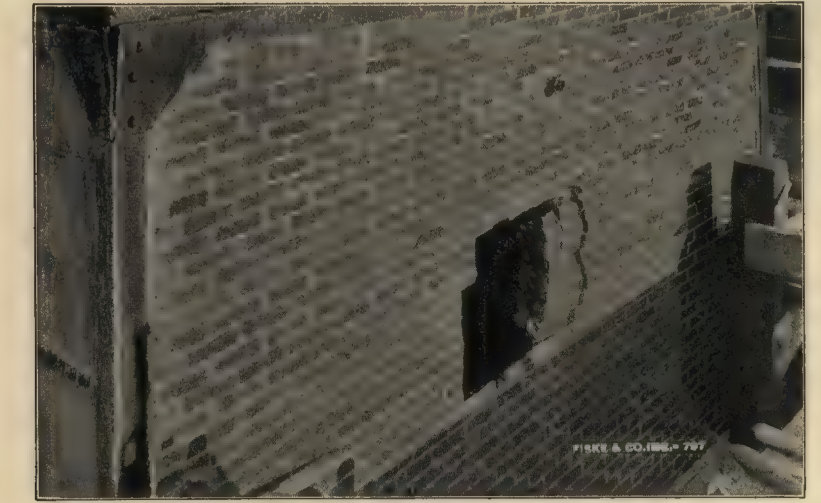
* NOTE: THE STRENGTH PER SQUARE FOOT (GROSS AREA) OF 10" AND 12" HOLLOW TILE WALLS IS OBVIOUSLY LESS THAN THE ABOVE, AS THE PROPORTION OF VOIDS TO SOLID MATERIAL IS GREATER

✦ NOTE THESE FIGURES ARE APPROXIMATE

Compiled from reports by Prof Macgregor & Prof. Hayward by Holt June 2, 1915. Drg. No 4838



Screw Jack in Position against Common Brick Wall
After Fire and Water Test



"Fisklock"-"Tapestry" Wall after Dynamometer Test.
Note Remarkably Perfect Condition of Wall
Except for Rectangular Hole

Playing Cold Water on Inside of Test House
Inside Temperature 1700° F.

Fire and Water Test:—A test house 14 ft. 6 in. long by 9 ft. 6 in. wide by 9 ft. 6 in. high was constructed, three of its walls being built respectively of hollow tile, common brick, and "Fisklock." On the inside of this house a fire was built and the temperature maintained for three hours at approximately 1700° F.

At the end of this three-hour period a stream of cold water was played upon the inside of the three walls in question through a two-inch nozzle, as shown in the accompanying picture, all in accordance with the specifications of the proposed Building Code of the

City of New York and of the Industrial Board of the New York State Department of Labor. In order to make the test as unfavorable for "Fisklock" as possible, the application was in the following order:

1st—"Fisklock" Wall.
2d—Common Brick Wall.
3d—Hollow Tile Wall.

The first application was for one minute on each wall; this was followed by a second and third application of two minutes each on each wall.

All of the walls passed this test successfully. The spalling of the "Fisklock" wall was somewhat greater superficially, but its structure, by reason of its interlocking features and the lesser penetration of the heat into the wall, was little affected, as is demonstrated by the remarkable lateral test described below.

Lateral Strength After Fire and Water Test:—At the conclusion of the above tests, pressure was applied to the center of each wall by a screw jack acting through two "I" beams, each 2 ft. long, placed against the wall 2 ft. apart, as shown in the upper left hand picture on the opposite page. The side edges of the wall were held by heavy vertical timbers on the inside, the top and bottom edges being substantially free. Pressure was applied until the wall failed, the amount of pressure being determined by a dynamometer.

The hollow tile and common brick walls showed a general failure throughout their mass due to lack of bond between adjacent tile or brick. After failure and the removal of the load, they showed very little resilience or tendency to return to their original shape. The "Fisklock" wall, owing to its interlocking and remarkable bonding features, snapped back, like a diaphragm, to somewhere near its original plane surface, leaving a neat, clean hole in the center where the material had been forced out by the I beams. This is shown on opposite page and demonstrates clearly that the structure was weakened very little by the application of fire and water.

The amount of total pressure required to rupture the three walls in question and the length of the walls, center to center of vertical timbers, was as follows:

Hollow Tile Wall — 7 ft. 3 in. long—5450 lbs.
Common Brick Wall—12 ft. 9 in. long—5350 lbs.
"Fisklock" Wall —12 ft. 7 in. long—7650 lbs.

If the hollow tile wall had been 12 ft. 7 in. long, as in the case of "Fisklock," failure would have taken place at approximately 2700 lbs.*

Heat Conductivity:—With approximately 1700° F. on the inside of the test house the temperatures on the exterior of the three walls, at the end of the third hour, were as follows:

Hollow Tile	210° F.;
Common Brick	178° F.;
"Fisklock"	142° F.;

thereby showing that the conductivity of the "Fisklock" was much less than that of the other two materials. Heat-curve showing these results is given on the following page.

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* Calculated by standard formula for free end beams, disregarding slight amount of fixedness at the ends of the wall.

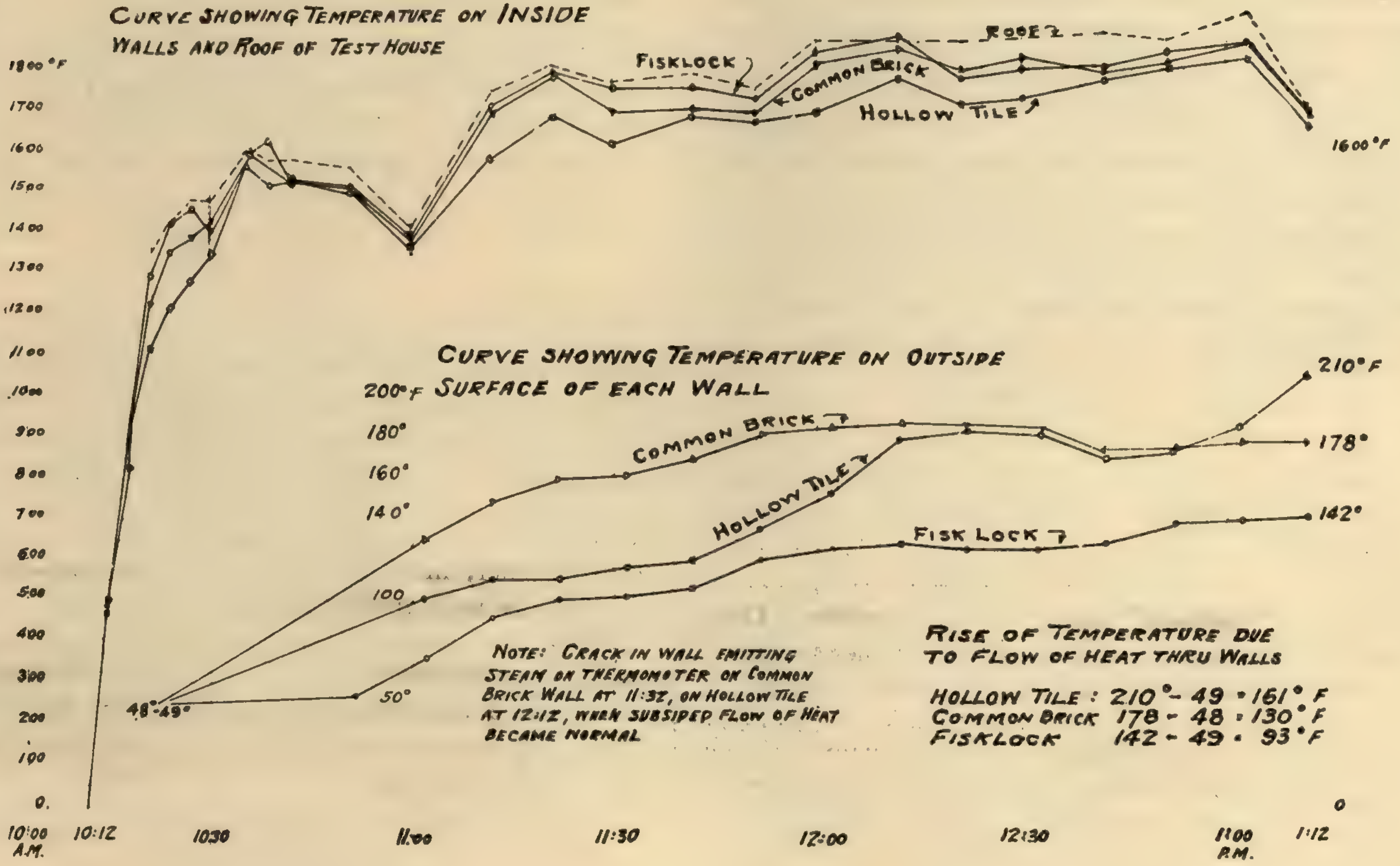
DRAWING No. 4792
DATE. MAY, 7, 1915

"FISKLOCK"-"TAPESTRY" BRICK

HEAT TEST

FISKE & Co. INC.
BOSTON & NEW YORK

Date: Febr. 24, 1915 Time: 10:12 A.M. to 1:12 P.M. Columbia Coll. Test.
Temperature of Air: 51°F Weather: Light showers; Light Wind, South to South East



NOTE: CRACK IN WALL EMITTING STEAM ON THERMOMOTER ON COMMON BRICK WALL AT 11:32, ON HOLLOW TILE AT 12:12, WHEN SUBSIDED FLOW OF HEAT BECAME NORMAL

RISE OF TEMPERATURE DUE TO FLOW OF HEAT THRU WALLS

HOLLOW TILE : 210° - 49 = 161° F
COMMON BRICK 178 - 48 = 130° F
FISKLOCK 142 - 49 = 93° F

Hdt

COMPARATIVE COSTS

At first sight it might seem an easy problem to determine absolutely the difference in the cost of buildings where different structural materials are used. As a matter of fact it is most difficult, if not impossible.

It very seldom happens that two buildings are constructed under precisely the same conditions—of exactly the same size, design and interior finish, in the same location, at the same time of year, with the same labor, with the same degree of efficiency in management, etc., etc. The cost of the buildings under consideration would inevitably be affected therefore by variables other than the structural materials used. To determine the relative cost of buildings constructed of different materials, it is therefore necessary to depend upon the accumulation of accurate data by reliable engineers and contractors over a long period of years and upon careful and logical deductions therefrom.

Much attention has been given to this question during the last few years and, after conference with reliable builders, figures of this character have been compiled by engineers, architects, and civic authorities in many parts of the country. As a whole they are found to agree to a remarkable extent with the figures presented herewith.

On page 26 is given a summary showing average comparative costs of different types of construction, and on pages 27 and 28 are given tables showing the unit prices of the materials in question, the unit prices of the materials in place (including labor), and the details of cost per square foot of surface for each type of construction.

These figures apply to a simple, straightforward, rectangular type of building without an excessive amount of angles, offsets, bay windows, porches, or other expensive features.

Arthur W. Joslin (Treasurer of MacDonald & Joslin Co., the well known building contractors of Boston), one of the best known experts in the country on cost of construction, has compiled the following figures on comparative cost not as an "estimate," but as the result of twenty years' careful time-keeping and record-keeping on a very large number of buildings of all sizes and types.

COMPARATIVE COSTS

All figures are based on prevailing prices for material and labor in and about Boston and New York, respectively.

All figures include inside plastering.

All figures represent net cost to the contractor, i.e., they do not include his profit, which must be added in each case.

The figures on "Fisklock" were compiled partly from data furnished by Mr. Joslin and partly from experience in actual "Fisklock" construction by other contractors.

Detail figures are given on the following pages.

No.	Type	Cost per Square Foot of Exterior Wall Surface		Excess Over Type No. 1					
				For the Exterior Walls Only		For the Whole Building—A "Three Decker" ★		For the Whole Building—A Single House ★	
		Boston	New York	Boston	New York	Boston	New York	Boston	New York
1	Frame, Clapboarded	27.3c.	30.0c.	....	....	....	....	....	....
2	Frame, Shingled	28.2c.	31.6c.	3.3%	5.3%	.6%	.9%	.3%	.5%
3	8-in. Common Brick	38.3c.	37.3c.	40.3%	24.3%	6.9%	4.1%	4.0%	2.4%
4	8-in. Brick, Face Brick Exterior	49.4c.	50.0c.	81.0%	66.7%	13.8%	11.3%	8.1%	6.7%
5	8-in. Brick, Harvard Brick Exterior	48.3c.	53.8c.	76.9%	79.3%	13.1%	13.5%	7.7%	7.9%
6	12-in. Common Brick	51.3c.	49.7c.	87.9%	65.7%	14.9%	11.2%	8.8%	6.6%
7	12-in. Brick, Face Brick Exterior	63.0c.	63.0c.	130.8%	110.0%	22.2%	18.7%	13.1%	11.0%
8	Brick Veneer on Frame	43.3c.	45.8c.	58.6%	52.7%	10.0%	9.0%	5.9%	5.3%
9	**"Fisklock"-"Tapestry" Brick**	**39.4c.**	**39.9c.**	44.3%	33.0%	7.5%	5.6%	4.4%	3.3%
10	Stucco on 8-in. T. C. Hollow Tile	42.9c.	42.8c.	57.1%	42.7%	9.7%	7.3%	5.7%	4.3%
11	Stucco on Frame	38.2c.	39.8c.	40.0%	32.7%	6.8%	5.6%	4.0%	3.3%
12	10-in., Face Brick Exterior–2in. Air Space	56.0c.	56.4c.	105.1%	88.0%	17.9%	15.0%	10.5%	8.8%

★NOTE:—Experience has shown that the cost of the exterior walls in a three-flat apartment house of frame is practically 17 per cent. of the cost of the entire building, while in the case of a $6,000 to $8,000 single house it is practically 10 per cent.

NOTE:—The above figures on "Fisklock"-"Tapestry" are based on a price of $30 per M brick f. o. b cars Boston, and $29 per M brick f. o. b. cars New York. Owing to variations in freight rates to different points and the consequent variations in the cost of "Fisklock"-"Tapestry" at different destinations, the above figures should be adjusted to suit the conditions, thus:

For a difference of each $1 per M brick f. o. b. cars your nearest freight station, add to or substract from the above "Cost per square foot of exterior wall surface," the sum of $\frac{65}{100}$c.

COMPARATIVE COSTS

ALL PRICES GIVEN BELOW REPRESENT THE COST TO THE CONTRACTOR:
TO THESE PRICES SHOULD BE ADDED THEREFORE THE CONTRACTOR'S PROFIT.

UNIT PRICES ON MATERIALS F.O.B. CARS DESTINATION

MATERIALS	BOSTON	NEW YORK	LOCAL
N.C. Pine Board per M. B.M.	$24.00	$28.00	
Spruce Lumber per M. B.M	26.00	30.00	
Clapboard, 6" Clear Spruce per M.	52.00	60.00	
Shingles, per M.	4.75	5.00	
Wire Cloth for Stucco, per sq. yd.	.22	.22	
Lime per bbl.	1.10	1.10	
Portland Cement (net) per bbl.	1.40	1.40	
Common Brick, per M	9.50	7.25	
Face Brick, per M	20.00	19.00	
"FISKLOCK"-"TAPESTRY" PER M. ✦	30.00	29.00	
Hollow TILE (8"×12"×12") per M	130.00	115.00	
Harvard Brick per M	15.50	21.50	

WAGES

LABOR		BOSTON	NEW YORK	LOCAL
MASONS,	per hour	65¢	75¢	
TENDERS,	" "	35¢	37½¢	
LABORERS,	" "	30¢		
CARPENTERS,	" "	55¢	67½¢	

✱ NOTE. FOR 10" VAULTED WALLS ADD $1.00 PER M. BRICK FOR EXTRA LABOR. FOR 12" WALLS DEDUCT $1.00 PER M. BRICK FOR SAVING IN LABOR.

✦ NOTE: EQUIVALENT TO ONE FACE BRICK AND ONE COMMON BRICK.

UNIT PRICES ON MATERIALS IN PLACE

MATERIALS		BOSTON	NEW YORK	LOCAL
Frame:	Spruce, per M. BM.	$26.00	$30.00	
	Nails for same	3.00	3.00	
	Labor " "	26.00	30.00	
	Total	55.00	63.00	
Boarding:	N.C. pine per M. B.M	24.00	28.00	
	Nails for same	3.00	3.00	
	Labor " "	8.00	10.00	
	Total	35.00	41.00	
Shingles:	Shingles per M	4.75	5.00	
	Nails for same	1.25	1.25	
	Labor " "	4.00	5.00	
	Total	10.00	11.25	
Inside Furring:	Spruce, per M BM ⅞×2"	24.00	28.00	
	Nails for same	6.00	6.00	
	Labor " "	40.00	50.00	
	Total	70.00	84.00	
Outside Furring (for metal lath)	Spruce furring per M Lineal ft.	4.50	5.25	
	Nails and Labor	1.50	1.75	
	Total	6.00	7.00	

MATERIALS		BOSTON	NEW YORK	LOCAL
Common Brick:	Brick, per M	$9.50	$7.25	
	Teaming	.75	.75	
	Mortar	2.50	2.50	
	Staging	1.00	1.00	
	All Labor	9.25	10.50	
	Total ✱	23.00	22.00	
Face Brick:	Brick, per M	20.00	19.00	
	Teaming	1.50	1.50	
	Mortar	2.50	2.50	
	Staging	1.00	1.00	
	All Labor	15.00	17.50	
	Total	40.00	41.50	
"FISKLOCK"-"TAPESTRY":	Brick, per M	30.00	29.00	
	Teaming	1.50	1.50	
	Mortar	6.00	6.00	
	Staging	1.00	1.00	
	All Labor	12.00	13.75	
	Total	50.50	51.25	
HARVARD BRICK	*Total*	35.50	44.00	

Hdt June 1, 1915 DRG No 4835

COMPARATIVE COSTS

ALL PRICES ARE FOR ONE SQUARE FOOT OF EXTERIOR WALL SURFACE AND BASED ON AN EQUALLY GOOD CLASS OF MATERIAL AND WORKMANSHIP IN EACH INSTANCE I.E. THE BEST

TYPE Nº 1

ORDINARY FRAME HOUSE COVERED WITH CLAPBOARD

MATERIALS	BOSTON	NEW YORK
Frame, 1 ft. B.M.	$0.055	$0.063
Boarding, 1¼ ft B.M	0.044	0.051
Paper	0.005	0.005
Clapboard, 1 sq. ft net	0.070	0.082
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Painting, 3-coat, 10¢ yd per coat	0.033	0.033
Total cost per sq. ft. of Wall	$0.273	$0.300

TYPE Nº 2

ORDINARY FRAME HOUSE WALLS, SHINGLED

MATERIALS	BOSTON	NEW YORK
Frame, 1 ft. B.M.	$0.055	$0.063
Boarding, 1¼ ft B.M	0.044	0.051
Paper	0.005	0.005
Shingles, 1 M. covers 100 sq. ft.	0.100	0.113
Plastering on Wood Lath - 60¢	0.066	0.066
Staining, 1 sq ft - 12¢ & 17¢ yd	0.012	0.018
Total cost per sq ft of Wall	$0.282	$0.316

TYPE Nº 3

8" BRICK WALL, FURRED AND PLASTERED INSIDE, USING COMMON SAND STRUCK BRICK, SELECTED FOR EXTERIOR

MATERIALS	BOSTON	NEW YORK
Common Brick - 13 per sq ft for facing & "backing up"	$0.299	$0.286
Furring - ¼ ft B.M.	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total cost per sq. ft of Wall	$0.383	$0.373

TYPE Nº 4

8" BRICK WALL, FURRED AND PLASTERED INSIDE, USING FACE BRICK FOR OUTSIDE COURSE

MATERIALS	BOSTON	NEW YORK
Face Brick - 6½ brick per sq. ft	$0.260	$0.270
Common " do	0.150	0.143
Furring - ¼ ft B.M.	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total Cost per sq. ft Wall	$0.494	$0.500

TYPE Nº 5

8" BRICK WALL FURRED AND PLASTERED INSIDE, USING HARVARD BRICK FOR OUTSIDE COURSE

MATERIALS	BOSTON	NEW YORK
Water Struck brick - 7 per ◻	$0.249	$0.308
Common brick - 6½ per ◻	0.150	0.143
Furring - ¼ ft B.M.	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total Cost per sq. ft of Wall	$0.483	$0.538

TYPE Nº 6

12" BRICK WALL FURRED AND PLASTERED INSIDE, USING COMMON SAND STRUCK BRICK SELECTED FOR EXTERIOR

MATERIALS	BOSTON	NEW YORK
Common Brick - 19½ per sq. ft (labor $1.00 per M. less than 8" Wall)	$0.429	$0.410
Furring - ¼ ft B M	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total cost per sq. ft. Wall	$0.513	$0.497

TYPE Nº 7

12" BRICK WALL FURRED AND PLASTERED INSIDE, USING FACE BRICK FOR OUTSIDE COURSE

MATERIALS	BOSTON	NEW YORK
Face Brick - 6½ brick per sq. ft.	$0.260	$0.270
Common Brick - 13 " " " " (labor $1.00 per M. less than 8" Wall)	0.286	0.273
Furring - ¼ ft. B.M.	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total cost per sq ft Wall	$0.630	$0.630

TYPE Nº 8

FACE BRICK VENEER OVER FRAME

MATERIALS	BOSTON	NEW YORK
Frame, 1 ft B.M.	$0.055	$0.063
Boarding - 1¼ ft B.M.	.044	0.051
Paper	.008	0.008
Face Brick	.260	0.270
Plastering on Wood Lath - 60¢ yd	.066	0.066
Total Cost per sq. ft Wall	$0.433	$0.458

TYPE Nº 9

8" "FISKLOCK" "TAPESTRY" BRICK PLASTERED DIRECTLY ON THE INSIDE

MATERIALS	BOSTON	NEW YORK
Fisklock - 6½ brick per sq. ft	$0.328	$0.333
Plastering - Direct on Brick - 60¢ per sq. yd	0.066	0.066
Total cost per sq ft of Wall	$0.394	$0.399

TYPE Nº 10

8" TERRA COTTA TILE, STUCCOED ON OUTSIDE AND PLASTERED ON INSIDE

MATERIALS	BOSTON	NEW YORK
Block - *	$0.130	$0.115
Teaming	0.008	0.010
Mortar	0.025	0.025
Staging	0.007	0.007
All Labor	0.043	0.055
Stucco $1.35 yd. *	0.150	0.150
Plastering, direct - 60¢ yd	0.066	0.066
Total cost per sq. ft Wall	$0.429	$0.428

TYPE Nº 11

STUCCO ON FRAME

MATERIALS	BOSTON	NEW YORK
Frame - 1 ft B.M.	$0.055	$0.063
Boarding - 1¼ ft B.M.	0.044	0.051
Paper - 1st Grade	0.008	0.008
Furring for Metal Lath	0.009	0.010
Wire Lath and Stucco $1.80 yd	0.200	0.200
Plastering - 60¢ yd.	0.066	0.660
Total Cost per sq. ft Wall	$0.382	$0.398

TYPE Nº 12

10" BRICK WALL - 2" AIR SPACE, FURRED AND PLASTERED INSIDE, USING FACE BRICK FOR OUTSIDE COURSE.

MATERIALS	BOSTON	NEW YORK
Face Brick - 6½ brick per sq. ft.	$0.260	0.270
Common Brick - 9 brick per sq. ft.	0.216	0.207
Furring - ¼ ft B.M.	0.018	0.021
Plastering on Wood Lath - 60¢ yd	0.066	0.066
Total Cost per sq. ft wall	$0.560	$0.564

Compiled by Hdt 27 May 1915 Approved

* No allowance is made for additional cost of SPECIAL Jamb blocks, Lintels and Sills: The price of Stucco includes allowance for openings and return on Jambs.

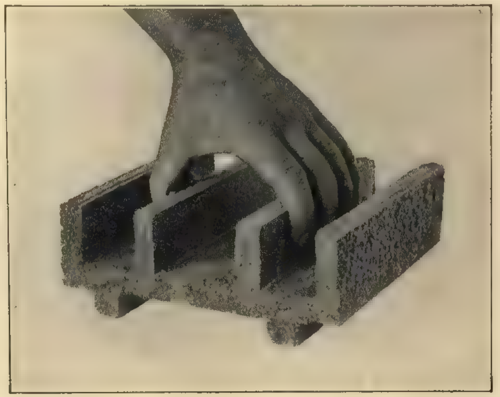
NOTE: All prices given above represent Cost to the Contractor. To these prices should be added therefore the Contractor's profit.

Hdt June 1, 1915 Drg No 4836

OF INTEREST TO THE CONTRACTOR

Two Brick in One:—It will be noted that each "Fisklock" serves not only as one face brick, but also as one "backing-up" brick. At the same time it does not weigh much more than a single face brick of some makes. This unusual advantage is, of course, due to the channel formation of the brick.

Ease of Handling:—By reference to the photographs below and on page 10, it will be seen how easily the bricklayer holds a "Fisklock" in his left hand while carrying the trowel in his right hand, exactly as in the case of ordinary brick. The bricklayer picks up the brick by gripping the two inside webs between thumb and fingers, the brick being so designed that the width of grip is almost identical with that of an ordinary solid brick. There is a marked advantage in this respect over hollow tile, where the units are so large that the mason must lay down his trowel and use both hands in setting a tile.



"Fisklock" is Easy to Handle

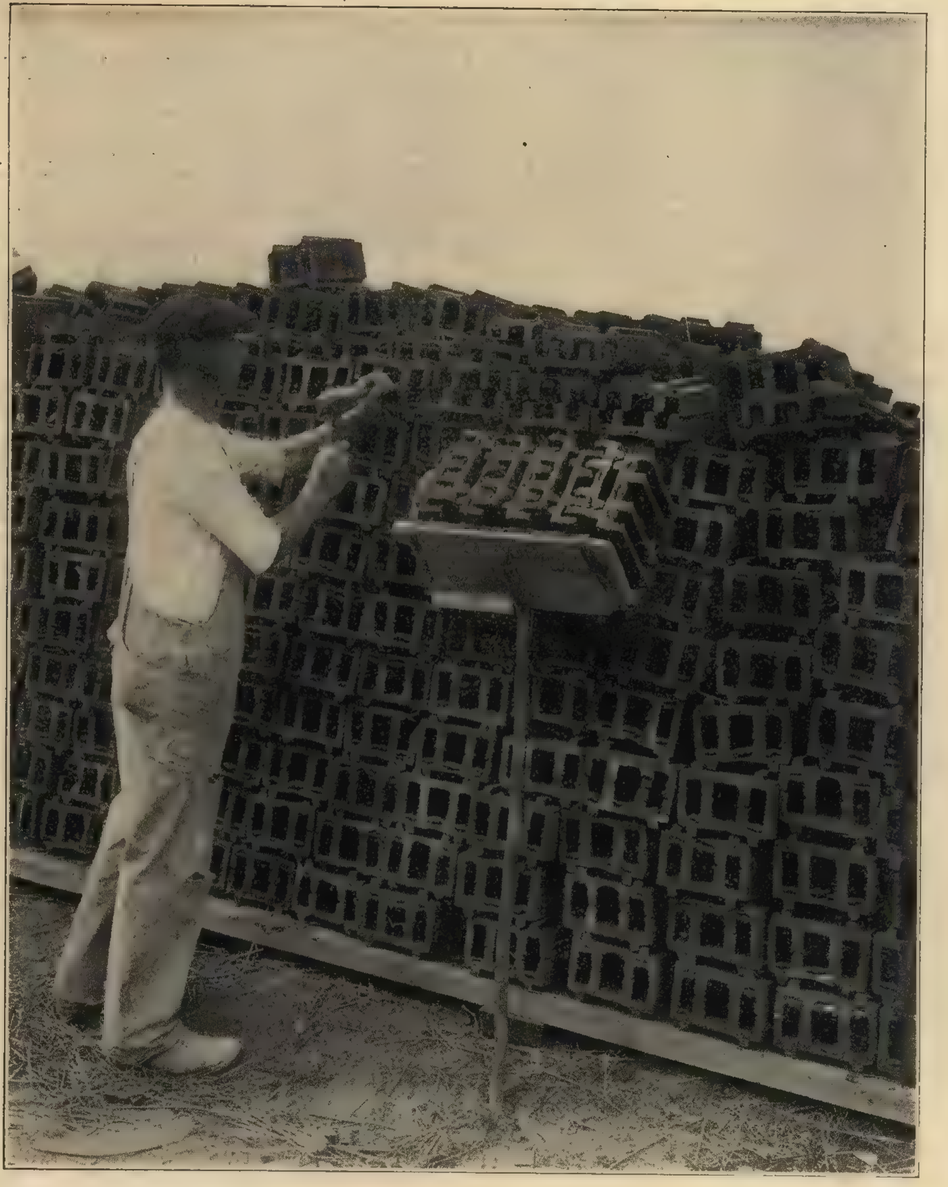
Each time the bricklayer stoops down and picks up a "Fisklock" he is picking up a face brick and a "backing-up" brick. Several journeymen have already called our attention to this fact, saying that "Fisklock" is the "bricklayer's friend" because in handling it he has to stoop down only half as many times in a day.

Ease of Laying:—Not only does the bricklayer pick up the equivalent of two ordinary brick each time he stoops, but when he lays a "Fisklock" in the wall he lays the equivalent of two brick—one face brick and one "backing-up" brick.

This picking up and laying "two brick in one" is what accounts for much of the remarkable economy of "Fisklock."

Easy to Hod:—As shown in the photograph on page 30, the material nests nicely together in the hod.

One ordinary face brick and one ordinary common brick combined weigh about 10 lbs. while one "Fisklock," which is the equivalent of the above, weighs only 6½ lbs. It will thus be seen that the hod-carrier, with no greater effort to himself, can use a large-sized hod and deliver on the scaffold the equivalent of 50 per cent. more material in the form of "Fisklock" than in the form of ordinary brick. This means an economy to the contractor, although no



Piling, Splitting and Hodding "Fisklock"-"Tapestry" Brick.

account has been taken of this in making up the estimates of cost already discussed.

Piling:—"Fisklock" is made "double," two brick being burned together in the form of a block, scored for splitting on the job.

Shipment and handling in this form minimize breakage and are therefore desirable both from the standpoint of the manufacturer and contractor.

"Fisklock" should be piled on smooth hard ground or upon planks; it should be piled on the flat, resting on the lugs with the voids horizontal, in this way protecting the faces from damage.

Splitting:—"Fisklock" may be easily and quickly split by placing a wide thin chisel on the two center webs at the scoring and striking a sharp blow with a stone hammer weighing 4 to 5 pounds. The outer webs should never be struck, as they are liable to break off.

Do not attempt to split "Fisklock" with an ordinary mason's chisel or "set," as it is too narrow and thick, while the mason's hammer is too light.

The most economical and satisfactory method of splitting is shown in the picture on the opposite page. The tender splits enough blocks in the top row of the pile to fill his hod which he then takes directly to the scaffold. All extra handling and damage to the brick are thereby avoided.

The cost of splitting the blocks is included in the cost figures already given.

Quantity of Mortar Required:—At first sight it might appear that an excessive amount of mortar is required. This, however, is not the case because of the fact that the mortar joints, both horizontal and vertical, are omitted for 2 inches in the center of the 8-inch wall, as clearly shown on page 3. Careful calculations show that the increase of mortar is not over 5 per cent.; in order to be conservative in our estimates of cost, however, we have allowed for an increase of 20 per cent.

Use of Mortar:—Attention is called to the absolute necessity of keeping the center channel free from mortar. If careless workmen slop the mortar into the center channel, thereby filling it up and creating "through" mortar joints, one of the principal advantages of "Fisklock" construction is lost. Where blind headers or other solid "Tapestry" Brick are used, backed up with common brick, an air space must be left between the "Tapestry" Brick and the "backing-up" brick as shown on page 15, for the reasons above mentioned. As every contractor is anxious to conserve his mortar and thereby save expense, it is only necessary to call this matter to the attention of the "boss" and he will do the rest.

Additional Information and Data:—It is manifestly impossible in a brief pamphlet of this size to discuss and dispose of every question which may arise. We shall therefore be pleased to receive any inquiries or questions from parties who may be interested in this subject.

METHOD OF DISTRIBUTION AND SALES POLICY

"Fisklock" "Tapestry" Brick is manufactured at our factories in western Pennsylvania and is sold directly to the local eastern trade by our Boston and New York offices; elsewhere in the country it is sold by our authorized agents, a list of whom will be gladly furnished upon application.

With the introduction of this new material we are also introducing a sales policy which is entirely new in the brick business—a frankly advertised "Open Price," uniform to all. Whether you buy directly of us or of our agents, the carload price is the same.

As freight rates vary greatly to different destinations, it is possible for us to advertise only the price f. o. b. cars factory. In every instance, therefore, the cost of transportation must be added. We shall be glad to ascertain the cost of transportation for any particular operation upon request from the intending purchaser.

The price on "Fisklock"-"Tapestry" Brick, carload lots f. o. b. factory, will be gladly quoted at any time, upon application. The current price will be found in the June issue of the "Brickbuilder," the July issue of "Architecture," and in the July 14th issue of the "American Architect," all of the present year.

While the price of this material may be changed from time to time in accordance with the cost of manufacture and the market conditions, due notice of such changes will be made through the architectural press.

The "Open Price" policy has been adopted by self-respecting merchants in nearly every line of business except that of building construction. The evils of the secret price, capriciously raised and lowered and subject to secret rebates and "rake-offs" to favored purchasers are too numerous and far-reaching to require lengthy discussion at this time. The secret price is a never-ending source of annoyance to the architect, introduces uncertainties and wastes valuable time for the contractor, and is of no real benefit to the owner.

We are now pleased to offer to all—the architect, the contractor and the owner—a high-grade building material at a uniform, published, "Open Price."

FISKE & COMPANY, Inc.

July 15th, 1915.